

# Come, Let Us Reason Together

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**ABSTRACT** The purpose of this commentary is to recommend critical thinking as a worthwhile and vital goal of education. However, any analysis must first investigate the style of critical thinking that best reflects the diversity of being human. Critical thinking is not exclusively a cognitive pursuit, concerned only with the analysis of arguments and premises but extends to pursuing and exposing the different cosmologies (origin stories) and epistemologies (knowledge) which make us human. Counter-factual and socio-cultural worldview thinking are offered as two methods that have proven effective for increasing a pursuit of truth and understanding.

**INDEX TERMS** Critical thinking, truth, cultural validity, counterfactual thinking, worldview, and cosmologies.

## 1. INTRODUCTION

This commentary analysis is about critical thinking and is pitched towards anyone who educates others. Writing a commentary requires extra effort because it requires one to think, and the goal here is to help educators think broadly and deeply about critical thinking.

As an educator actively involved in higher education, the following perspectives develop from professional experiences, that is, experiences based upon actual discussions and observation. Although my reflections are drawn from personal and lived experiences, they could be and probably are the experience of other educators. The goal here is to raise, what I consider, is an important discussion concerning critical thinking.

Critical thinking has been a stated goal of education, evident in all subjects and throughout the ages. To think critically is to think clearly, to problem solve, to identify the cosmologies, epistemologies, ontologies, and axiologies that guide people to think and behave in the world. Ultimately, critical thinking is a pursuit of truth and is always within complex and dynamic environments. To pursue what is true is to be human, consequently, critical thinking is at the very essence of being human [1].

There are also ‘types’ of critical thinking which should be distinguished. One type is the cognitive approach which involves academic/philosophical techniques. For example, critical thinking connects ideas and concepts, determines faulty premises and bias in arguments and evaluates thoughts, ideas or make judgments with awareness, creativity and refinement. The second type is the psychological approach which involves having a good understanding of

scientific procedures, effective control techniques, and legitimate forms of evidence to evaluate what people do.

The third domain of critical thinking is the *socio-cultural* approach. This approach considers how thinking processes are influenced by cosmologies, ontologies, and epistemologies. Socio-cultural critical thinking is advantageous because people work together to solve problems; meaning, they “do not only interact, they ‘interthink’ by combining their intellects in creative ways that may achieve more than the sum of the parts [2]. For example, people express ontologies that can be spiritual or material in nature. They come to recognize that life can be understood as material or as fundamentally spiritual.

The focus of this paper is to discuss and promote the socio-cultural approach of critical thinking. It is the socio-cultural application which this commentary deems vital for educators and students to apply within epistemological and ontological diverse classrooms.

## 2. THINKING LIKE A PERSON

One of the characteristics of being human is to first recognize our personhood. Personhood highlights our rationality. Persons are endowed with reason. To reason is not merely an academic pursuit, such as identifying flaws in an argument, evaluating premises and conclusions; rather, reasoning involves the human imagination flanked by what *is* and what *ought* to be. For example, as a person, I am in regular discussions with myself concerning what I desire in life as opposed to what I *should* desire.

In other words, having personhood means that I can think *on-line* and *off-line*. The phenomenologist, Sokolowski [1]

explains the concept by using an imaginary cube to illustrate how persons can reason on-line (in the present) and off-line (in the past or future). A person can reason in terms of what is (on-line) and what could be (off-line). Sokolowski asks us to consider an imaginary object, such as a cube. I cannot see the cube, nor can I see any sides of the cube. However, I can imagine the cube, I can imagine what is not before me. I can imagine what is present (visible) but I can also imagine what is absent (invisible).

In other words, I can show up a part of the world when that part is not present to me. When I encounter a tree in a forest, I do not just see a tree, I classify the tree by its color, texture, shape, and size and I give it an identity, such as 'ancient', 'healthy' or 'unstable.' I experience its 'tree-ness' by giving it attributes, such as 'age' and 'intelligence'. I can also 'tune in' to someone else's thoughts and think about their mental states, including emotions, beliefs, needs and knowledge and I can do all this in the presence and in the absence of the person or object.

Why is on-line and off-line thinking important for a discussion about worldview and critical thinking? Simply because reasoning is not just about the evidence before us, but that as persons, we can go beyond the evidence, and see more than what strikes the eye. Unlike animals or computers, the ability to deal with the absent (off-line) is therefore one of the essential features of being a person.

### 3. SOCIO-CULTURAL LIVED, IN-THE-WORLD, PRACTICES

The critical thinking endorsed in this commentary is a socio-cultural worldview approach and is explained by Sepie [3]:

Worldview is oriented toward understanding lived, in-the-world, practices, whether they are disciplinary, political, cultural, religious, or social and addressing what we might do differently in the quest to take seriously those aspects of life and practice that we might claim to take seriously, or that are taken seriously by others, but not always by 'us' [p38,82].

With this understanding, a socio-cultural worldview approach is like a dance between two individual bodies. One body works together with itself, but it also works together with the other body, while both bodies work together with the music. There is harmony and a kind of disharmony in movement: intentional and unintentional. Disharmony would be one body in disagreement with the other. Intentional disharmony would be understanding the disagreement and forcing the body do something it would not naturally do.

The socio-cultural worldview approach to critical thinking is like a dance between two bodies. The dance analogy is helpful because it suggests that although worldviews can be vastly different, they can also coexist in a space of learning.

Therefore, the heartbeat of socio-cultural worldview critical thinking is the longing to know – to understand how life works for oneself and for others. It is a way of understanding worldviews that offer core beliefs, not simply superficial behaviours that are most obviously visible [4]. When people long to know and understand other epistemologies, they are in a better place to appreciate the range of values, behaviors, beliefs, and social structures that guide the behaviour of people. Consequently, those who are outstanding at this type of critical thinking tend to be particularly self-aware and able to evaluate their personal motivations, interests, prejudices, expertise and their gaps in knowledge before they assess others [3]. Becoming self-aware is a first step process which takes courage, especially if it requires us to question our belief systems, as beliefs and prejudices share and shape our core identity.

Although socio-cultural worldview critical thinking pursues truth and understanding; there are no guarantees this will ever be accomplished, because truth ultimately remains to be actualized. Yet it is still worth pursuing because in contrast, cowardice and intemperance are failures in co-existence and veracity [5]. Socio-cultural critical thinking contrasts individualism, where everything transforms into isolation as the individual intellect is given the task of figuring it all out [6]. Rather, as socio-cultural worldview thinkers often say, "we reason together, pursuing together new ways of knowing, and understanding the origin stories of each other."<sup>1</sup>

Mary Warnock [7], a British philosopher, author, educator and critical thinker, had an exceptional ability to debate and experience success amongst seasoned educators and philosophers. Way back in 1974, Warnock was involved in a debate on neutrality and religion. She argued that educators should teach their students how to think critically by first explaining how they themselves think critically, especially about controversial issues. Warnock was supportive of worldview thinking and argued that teachers should never remain neutral or retreat from worldviews or topics that were generally believed to be controversial. With learning as the goal, the educator first displays their worldview publicly and then proceeds to offer their students the cosmologies and ontologies they draw on to make sense of life.

### 4. COUNTER-FACTUAL AND WORLDVIEW CRITICAL THINKING

Socio-cultural critical thinking can transpire in one of two ways. The first involves *counter-factual* thinking and the second is *worldview* thinking. In my experience *counter-factual* thinking is a forerunner to *worldview* thinking. These two approaches have proven to be effective in a

<sup>1</sup>These are the types of comments offered by students in my class after they have conducted socio-cultural worldview analysis.

quest for greater understanding of the lived, in-the-world, practices, that are taken seriously by others.

*Counter-factual* thinking is discerning an event, behavior or idea *counter* to the facts. For example, Y explains the facts as we know them, but what if X was conceivable and Y was improbable; how does X change the situation and consequence. Counterfactual thinking is *empathic*, that is, by wearing the “shoes” of another we are encouraged to assess from that ‘place.’ Initial questions include asking why certain events, ideas, beliefs or behaviours transpired and why, *ex post facto*, there was no other probable outcome.

The 1998 movie *Sliding Doors* provides a useful illustration of two different scenarios, one real and one counterfactual. In one scene, the actor Helen catches the train while in another scene, because she's been delayed, she misses the train, and the doors close in her face. We can call these scenes *Helen A* and *Helen B*. Whichever narrative occurs will be seen, during and after its ending, as the “factual” or “actual” world. The one (or ones) that do not occur are called “counterfactual.” In consideration of the two scenes, one scene is real and the other is “counterfactual”, that is, a version of events that did not occur, but which *could* occur, at least theoretically.

The second approach to critical thinking is through a socio-cultural worldview analysis. As previously noted, this always starts with cosmology and ends with practice. Sepie [3] explains the process of the cosmological approach:

Cosmology is the key organizing principle for worldview which is a set of charter myths or origin stories (cosmology) that determine which objects or entities are ‘allowed’ to exist, or not (ontology), as a part of everyday experience. Worldview requires an understanding that certain origin stories tell how the ways things are, ought to be, and involves becoming aware of those stories that are working behind the scenes to inform our own reality [p8].

Consequently, socio-cultural worldview thinking requires an examination of the stories that people tell about themselves concerning what is important to know, how to behave, and what to value. Socio-cultural worldview analysis exposes the multiple paradigms which exist and the plurality of ways in which the world around us is read and interpreted [3]. The principles internal to a socio-cultural worldview approach uncovers our symbolic interpretative materials, our values, and our actions, and an explicit awareness of worldview concepts can inform our collective abilities to act differently in/on the world” [9 p435].

One example of using a socio-cultural worldview approach to solve a dilemma is the case of a drug problem in a local neighborhood. Understanding the problem first begins with the insights and assistance of people living in the neighborhood. We decide to problem solve together

with weekly face to face meetings sharing ideas, beliefs, personal values and of course potential solutions. The neighbours propose what they see as the origin of the problem drawing on their beliefs about human nature. Each worldview has a story to tell about *who* we are and *why* we behave in the ways we do.

The offering of various worldviews presents different approaches to understanding the players involved and the situation. The neighbours soon come to realize that not everyone thinks the same way regarding the situation and the potential solutions. Because of this experience, they are richer in knowledge, understanding and empathy. They considered perspectives and ideas that revealed various scenarios for potential action.

By adopting a socio-cultural worldview approach, the neighbours experienced and gained knowledge in the lived-world practices of others, even if the practices were disciplinary, political, cultural, religious, or social [3]. This is just one example where socio-cultural worldview critical thinking cultivates a greater relationship among thoughts, social interactions, communication, and dialogue [10].

*Counter-factual* thinking and *worldview* thinking generate a posture of perspective-taking and encourages a humble attitude for learning, which is essential for healthy dialogue. These two practices are a reminder to accept our epistemological boundaries, limitations, and biases and recognize our epistemological limitations. By doing so we are in a better place to move towards a posture of epistemological humility [11]. As the philosopher and libertarian, John Stuart Mill [8] said, “no one is infallible and to refuse a hearing to a minority opinion, because they are sure that it is false, is to assume that *our* certainty is the same thing as *absolute* certainty” [p95]. Hence, all silencing of discussion, ideas and worldviews is an assumption of human perfection. The problem is that many people are certain of their beliefs because they generally listen and read exclusively in one discipline, which can “damage the mind and shackle it to the technicalities with which it has become so familiar” [3].

In a world of virtual know-it-alls, people find it challenging to practice patience, humility and perspective taking, particularly from opposing worldviews. Socio-cultural critical thinking, in the two ways described, requires educators to show by example that learning in action means that no one is omniscient [5]. The *humble* critical thinker recognizes that learning from the *Other* gives rise to their responsibility to consider beliefs and convictions similar to or different from their own principles. Therefore, an essential quality for socio-cultural critical thinking is humility, open-mindedness, and a respect for the worth of persons.

Open-mindedness furthers the opportunity for critical thinking, dialog and learning because it calls for a generous amount of impartiality. It is typical that sensitive topics often attract diverse viewpoints, which can evoke more heat

than light. However, socio-cultural critical thinking creates a posture of listening and learning to ‘come together’ and reason, rather than ‘come together, and agree.’ To reason in this way is nothing other than fully awakened consciousness. The cultural critic and author bell hooks advocates for ‘radical openness’ because, as she notes, “it became clear to me, after years in academic settings, that it was far too easy to become attached to and protective of one’s viewpoint, and to rule out other perspectives” [15 p10].

Dialoging and reasoning together over important topics requires humility, open-mindedness and patience. In that sense, critical thinking is not only a cognitive individual pursuit, but requires a comprehensive understanding of origin stories (cosmologies), drawing upon a collection of intelligences to better understand a phenomenon. This is because cosmologies shape all epistemologies, scientific or otherwise [12]. The ancient Greek historians utilized a generous cosmological approach to knowing as they searched for the patterns that caused something to be or not. An Athenian assumed that to understand the whole context, one would need to consider the context from diverse perspectives. This contrasts with Spartan methodology, which looked merely at the parts [13]. Consequently, the Athenian was in a better position to consider various origin stories that could explain a particular phenomenon. Their thinking was wide-ranging, external to the immediate particulars, and in that sense, they were better equipped to reason critically.

Although definitions of critical thinking remain, and while most assume a posture of truth-seeking, humility and creativity, the two prominent ways to increase creativity, humility and truth-seeking are *counterfactual* and socio-cultural *worldview thinking*.

## 5. CRITICAL THINKING

### 5.1 CRITICAL THINKING AND EDUCATION CONFERENCES

I confer to two conferences in education which I provide as illustrations of inadequate critical thinking. A few years ago, I attended a one day technology conference for instructors in higher education. Usually, education conferences are held over a few days, however this was a one-day conference, so time and resources were limited. The conference began with a keynote speaker talking about the importance of educators providing regular technological experiences for their students. The rationale was to further their critical thinking. They offered various digital strategies to increase critical thinking in the classroom.

Approximately twenty minutes into the conference the keynote declared to an attentive audience that “educators remained morally culpable if they failed to embrace, celebrate and encourage a technologically rich learning environment.” The message was obvious, critical thinking

should be experienced digitally and for educators not to do so was to demonstrate an absence of critical thinking on their part. After all, a digitalized world is reliable, safe, dependable, personal and motivating. Thirty minutes into the presentation the technology faulted, and the computers froze. The keynote speaker provided us with continual updates assuring that teams of technicians were working on the technological hiccup. There was an obvious irony in attending an education conference purporting the necessity of digitizing education but could not advance due to a failure of the technology. This only increased the skepticism for educators to increase their digital world of learning.

In the question-and-answer time, audience members questioned the speaker’s claim about having a “moral responsibility” to increase their students digital learning. In his book, *Digital Detachment: How Computer Culture Undermines Democracy*, Chet Bowers [14] explains that the digital culture is problematic because it assumes the myth of progress and ignores other ways of knowing, learning and being which traditions and cultures have drawn on to sustain their communities for thousands of years. The main point for Bowers is what I enjoyed least about this experience, which was a lack of independent critical thinking on the part of the presenters. There was no dialogue concerning the losses and gains of digital education. As bell hooks [5] notes, “in traditional higher education settings, students find themselves yet again in a world where independent thinking is not encouraged” [p8]. So how can educators draw on those traditional collective wisdom teachings that have been passed down from generation to generation in the form of stories and practices, and shared between adult and child in non-digitized environments? One way is to evaluate how problems have been traditionally understood, and how the attributes of problem solvers in both historical and more recent times have been able to draw on the collective wisdoms of different people groups and belief systems.

When educators promote a prevailing digital culture of learning they create dependence upon outside experts, contribute to a steady stream of having to purchase new technologies and undermine other ways of knowing. The consequence to all of this is best expressed by Van Brummelen, [15] when he signals that students will be encouraged “to develop a weak commitment to the common good” [p64] which is vital to the survival of a democratic way of life. Unfortunately, these ideas, together with a lack of discussion concerning the losses of digitizing instruction and learning, have disallowed a “common paideia to flourish in our society since it undercuts communal authority and shared moral democratic commitments” [15 p23].



## 5.2 AN EDUCATION CONFERENCE IN CRITICAL THINKING

In the summer of 2014, I attended an annual conference in the humanities to hear – in one double session – how the teacher educators were practicing critical thinking with their students.

One session had a particular impact on me. Two education professors described in detail an approach they used by which student teachers were taught to think critically. “Critical thinking”, they explained, “is the smashing down of old ways of thinking” and “the purpose of critical thinking is to always rock their boat” [16].

Although it is never wise to immediately judge an idea without first trying to understand the actual or intended meaning, I was astounded that no one present in the room that day (except myself) showed any surprise that education professors would choose to use the expression “smashing down old ways of thinking” in a presentation on critical thinking. There was an opportunity in the question-and-answer period to clarify their views and so I stayed to listen. Did they propose that traditional ways of thinking were “old” and consequently irrelevant to learning or that “old” ways of thinking were too hot to handle in the public schools?

In the question-and-answer time, the education professors clarified their views and practices. They said, “critical thinking is utilizing new and innovative ideas and not previous [old] knowledge or values from a bygone era” [16]. As noted, one concern is that no one present in the room (except the author of this paper) showed any surprise that education professors would choose to use the phrase “smashing down old ways of thinking” in relation to critical thinking, however my greater concern was that if these educators want tolerant students who can think critically, living peacefully together in societies of increasing diversity, surely it would be necessary to understand and learn from other epistemologies besides our own and refrain from ferocious expressions such as “smashing down” traditional ways of knowing. History has shown that intolerance to “old ways of thinking” can become an unforgettable reality. In the early years of the Cultural Revolution (1966–76) in Beijing, China, the *Four Olds* which included *Old Customs*, *Old Culture*, *Old Habits* and *Old Ideas* were replaced with the four *news* to modernize and establish a new society.

A broader and more tolerant understanding and practice of critical thinking would prepare individuals and institutions for a society that is increasingly heterogeneous. It is for this reason that a socio-cultural worldview critical thinking approach is preferred to advance the ideals of learning, tolerance and democracy.

## 5.3 CRITICAL THINKING AND CLASSICAL TOLERANCE

The idea of tolerance has had it rough of late, nevertheless, to think critically, that is, in a socio-cultural way, one must learn to preserve and implement an attitude of tolerance.

Classical tolerance, is a style of tolerance which always entails disagreement and the right for someone to believe in, teach and live out their idea, value, or behaviour (assuming the belief does not lead to behaviour which promotes physical or psychological suffering). Classical tolerance maintains the advancement of truth, highlights differences and commonalities, builds cultural and religious literacy and assists with forming open-minded educated citizens living within diverse multi-cultural and multi-religious societies.

Classical tolerance best reflects traditional liberalism which rests upon the idea that there are multiple and competing ‘good lives’ and that individuals ought to be allowed to choose among these good lives with little intervention from the state. Although the practice of *classical* tolerance is essential for a free and functioning democratic society, during the last two decades the idea of tolerance has undergone revision as antithetical to a respect of persons.

In a TEDx talk [17] the speaker opens by bolding claiming that “tolerance is a dirty word” and “we must eliminate it from the American vocabulary.” The speaker declares that tolerance is inadequate because it implies that the one who tolerates will not allow another to be themselves “but only to just exist.” The claim is that if I tolerate you, I make no effort to know you or develop a caring relationship with you. You exist, I can accept the fact, but that is all. If this is what tolerance is then indeed, I agree, we must replace it with something more compassionate. One cannot truly flourish as a human being by just existing. Moreover, communities could never be places where people reach out to their neighbours in love and care. If this really is tolerance then it is unjust, inhumane and must be substituted by a more adequate concept such as respect and celebration. However, this view of tolerance is not *classical* tolerance and is therefore fundamentally mistaken.

The significance of *classical* tolerance is attributed to the French philosopher Voltaire who argued in favour of tolerating religious belief, while reserving the right to argue strenuously against it, which he did. Although there is some doubt as to whether Voltaire precisely uttered the following explanation of tolerance, he is frequently attributed with the following and it is worth repeating here: “I disagree with what you say, but I will defend to the death your right to say it.”<sup>2</sup> I disagree with your ideas, how you think about what you do, but not as a person with worth. In that sense, *classical* tolerance frees you to believe as true something

<sup>2</sup>This quotation is from the work of English biographer, Evelyn Beatrice Hall who used this quotation to describe Voltaire’s “attitude” in her 1906 biography, *The Friends of Voltaire*.

another person might believe to be false, and in some cases even objectionable. I can tolerate your beliefs and at the same time defend your right to believe it. Moreover, I can disagree with you, and I can love you as a person with worth and respect. For those of us who might question why someone would even need to tolerate something they believe to be wrong, the answer is simple – “you tolerate it because people are more important than beliefs – ethics supersedes epistemology [18].

The TEDx speaker does what many people tend to do, they see tolerance and respect of persons as contradictory. The problem here lies in what tolerance really is and is not. Tolerance, as previously stated, in its *classical* application acknowledges the importance and preservation of liberalism, that is, a recognition that there are many good ways to live. It identifies epistemological differences with ideas and beliefs, and respects personhood. It is not just that people have a right to different beliefs and values, but that people have *worth* and worth comes before rights. Human beings can disagree with a view and respect a person simultaneously. Respect is a necessary condition of *classical* tolerance. Respecting persons as valuable ends in themselves – one is tolerant and respectful of the person at the same time. This presents not a dilemma for educators, but a motivation to help students understand and tolerate the diverse cosmological and epistemological underpinnings which provide the teachings, values, and guidance for people to direct their lives.

Unfortunately, some people are intolerant of any type of tolerance and as a result critical thinking suffers. In 2021, Portland State University professor Peter Boghossian resigned from his position at his university [19]. Boghossian specializes in critical thinking, ethics, the Socratic method, and the philosophy of education. He invites speakers to his classes not because he agrees with their worldviews, but primarily because he does not. He explains that “questioning beliefs while respecting believers; staying even-tempered in challenging circumstances; and even changing their minds, is vital for critical thinking.” Boghossian resigned after what he described as years of harassment from colleagues and students. What did Boghossian do? In his resignation letter to the university provost, Boghossian wrote the following, “Students at Portland State are not being taught to think.”

The resignation of Boghossian is one example of educators losing faith in an education system that once encouraged students to exercise tolerance and think critically outside of their own worldview. The discrepancy between pursuing truth and social changes in culture is on precarious ground. The irony here is that institutes of learning, in this case, a university, no longer promote the importance of tolerance and critical thinking in higher education. The university has for a long time been the one guaranteed place where students and instructors could agree to disagree, push back on ideas, express views that were

different to public discourse, and tolerate conclusions that were not their own. The freedom of the university allowed it to encourage students to think critically about any topic or worldview and this was the blueprint for defining an educated mature person. When cultural changes cancel the overall mission of the university, which is to promote critical thinking, there are dire results. History has shown that those who professed veracity over cultural, political or traditional customs often met unjust ends. Socrates poisoned himself, Christ was crucified, and Galileo was imprisoned.

One important figure in history who recognized and experienced worldview intolerance was the Czech educational reformer and father of education, teacher, scholar, and author, John Amos Comenius. Born on March 28, 1592, in Nivnice, Moravia Comenius supposed that the key to intolerance was education. Comenius spent a lifetime seeking relief from discrimination and allegation. Comenius believed that education could provide a vehicle for promoting tolerant people, however education by itself is no guarantee that people will think critically or apply tolerance to those who think differently. There are too many examples of educated people perpetrating intolerance against people they deemed as the *Other*. Although truth, empathy, patience, tolerance and wisdom are the goals of critical thinking and education, education is no assurance that people will pass wisdom, patience, humility and understanding over to others.

However, Comenius was right when he implied that when *classical* tolerance is applied, people are discouraged from seeing people and the world from a one-dimensional perspective and are more inclined to experience and treat people as real three-dimensional beings. Just as there should be attention given by educators to the promotion of an inclusive learning environment, educators also need to explore how they can implement a comprehensive and correct application of *classical* tolerance in schools that sustains diversity and liberty of critical thought. If we lose classical tolerance, we lose critical thinking, epistemological diversity, and we all perish.

In an age of division, tribalism, and the categorization of people into groups that are either good or bad, we need people more than ever who can draw upon *classical* tolerance to think in a socio-cultural way about any topic, idea, or practice. Society needs mature, humble, educated people who can bring light to problems rather than heat, emotion, and division.

### 5.4 CRITICAL THINKING: LIFE IS BRIEF AND SEEING WITH TWO EYES

One of the most distinctive features of what it means to be a person is having the capacity to understand that everything you cherish is provisional and corruptible. Philosophers have discussed at length how human beings have “managed this angst by constructing or adopting worldviews that

transform the brute existential realities into a purposeful, stable, and manageable symbolic world” [20] The majority of people do not reflect on their mortality, life is largely about living – not dying. However, for those who live by particular cosmologies, this is irresponsible, because one can appreciate all that life has to offer and at the same time think about the unique phenomena of death. In fact, one could argue that a serious reflection about death provides one with a life that has even more meaning and value.

I associate this with a tradition that Indigenous peoples describe as *Mi'kmaq*, translated as *two-eyed seeing*. With two-eyed seeing one learns to ‘see’ life from one ‘eye’, i.e., the strengths of Indigenous epistemologies and ontologies, and from the other ‘eye’ with the strengths of mainstream epistemologies and ontologies, and this two-eyed seeing is done for the benefit, respect and understanding of all [21]. The two-eyed seeing approach is a type of reasoning because it assumes that learning can take place from “other knowledge systems which contribute in parallel to produce an enriched and larger picture of life with a shared understanding” [21] [p246].

By contemplating life and our mortality, that is, from *two-eyes*, we become wiser. The philosopher Lucius Annaeus Seneca [22] touched on this theme in his piece, *On the Shortness of Life*:

It is not that we have a short time to live, but that we waste a lot of it. Life is long enough, and a sufficiently generous amount has been given to us for the highest achievements if it were all well invested. But when it is wasted in heedless luxury and spent on no good activity, we are forced at last by death's final constraint to realize that it has passed away before we knew it was passing [p142].

In our habitual compulsion to ensure that the next moment contains what this life lacks, Seneca recommends that our lives are reflective, we appreciate life and divorce ourselves from superficial distractions, or as Gardner [23] suggests, we grow into “accomplished fugitives from ourselves” [p13]. Two-eyed seeing approaches requires personal reflection, places importance on different ways of knowledge and forges relationships with individuals and communities.

## 6. DISCUSSION AND CONCLUSION

I have argued that one important outcome of critical thinking is to recognize the worldviews that people use to make sense of the world. I have argued that in doing so, a socio-cultural worldview approach provides a vehicle for understanding the various cosmologies, epistemologies, and ontologies that guide people's behaviour. This is important because as John Stuart Mill acknowledged, no individual is infallible, we should seek to learn from beliefs that are not our own, and that not to do so indicates infallibility, which is self-deception.

It has been suggested that the socio-cultural worldview way of thinking is guided by cosmology (origin stories). Science has an origin story, various theologies and cultures have their origin stories. Origin stories act as a litmus test which accepts and rejects other cosmologies as being untrue or only partially true.

One of the fundamental reasons many social issues disputes remain unresolved is because people apply different worldviews to circumstances that are cosmologically and ontologically distinct. Unfortunately, if we encourage a climate of restricted cosmologies, by ignoring anything that diverges from mainstream opinion we diminish critical thinking (see Peter Boghossian). As a result, there is a missed opportunity for deeper learning.

This article hopes to persuade educators and students to embrace a deep and meaningful practice of critical thinking. Critical thinking, as I have proposed, is broader than a philosophical (logic) or psychological (behaviour) methodology these fail to acknowledge the epistemologies and ontologies of other worldviews. A social-cultural worldview approach reveals *who we are* and can therefore help students and teachers to first examine themselves. We are persuaded to do a worldview assessment of ourselves. To *know thyself* first is vital for educators to encourage in their learners because an unexamined life is not worth living.

Learning is about a change: the change brought about by developing a new skill, understanding a scientific law, or worldview. Learning is internal to learners; therefore, teachers cannot motivate others if they are not self-motivated. Educators must first evaluate their own origin stories, belief structures, biases, instructional methods, and practices to understand the convictions and origin stories of others.

Socio-cultural worldview and counter-factual thinking promotes learning because both practices reveal other realities and possibilities for problem solving. Socio-cultural worldview critical thinking assumes the importance of truth seeking even if it turns out to be unpleasant. Typically, we do not tend to perceive truth seeking as something that could set us free because it embraces pain, acknowledges our differences, and conflicts, and takes our real situation into account [24] [p82]. Instead, we isolate, and move and breathe with those who think the same as we do. Our social media feeds quickly turn into echo chambers instead of thought-provoking dialogue, learning and critical thinking.

Thinking critically in the two ways suggested presents an opportunity to understand others from their cosmologies. This means that as learners we critique how we think about what we cherish to be true. Such a critique might place us in a minority position amongst friends, family, or colleagues, because as the critical theorist bell hooks suggests, “when we make a commitment to become critical thinkers, we are already making a choice that places us in

opposition to any system of education or culture that would have us be passive recipients of ways of knowing” [21] [p185]. It takes courage, wisdom, and patience to consider alternate epistemologies. However, there are lifelong pay offs for being a socio-cultural worldview and counterfactual thinker, some of which include [25]:

- *Acknowledging personal limitations*
- *Seeing problems as exciting challenges*
- *Having understanding as a goal*
- *Interested in others’ ideas*
- *Thinking before acting*
- *Keeping an open mind*
- *Engaging in active listening*

In these times where the threat of division and tribalism is so very real, it is vital for educators to foster classrooms of socio-cultural critical thinkers. Educators should encourage the next generation to imagine life from multiple perspectives, examine one’s own thinking, and reveal what might otherwise seem straightforward. After all, education should foster humans to be fully human. This is how we are made to be.

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